Name:

Networks: Protocols and Routing

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| **B** | **Routing** | | | |
| **Encapsulation** | | | Enclosing data inside another data structure to form a single component | |
| **De-encapsulation** | | | | Stripping external data from an encapsulated item to extract the original data |
| **Header** | | Information at the beginning of a packet including IP addresses of sender and receiver, protocol, packet number and length of packet | | |
| **Packet** | | A division of data which is to be sent over TCP/IP, including a header and trailer. Created by software | | |
| **Payload** | | Data in a packet which is what is meant to be sent | | |
| **Trailer** | | Information at the end of a packet including error correction and end of packet marker | | |
| **Layering** | | A system of rules, organised into an order in which they are applied | | |
| **Circuit switching** | | Method of routing which involves opening a connection between two nodes and sending data in a stream before closing the connection | | |
| **Packet switching** | | Method of routing which involves data being divided up into packets and sent in multiple pathways to the destination | | |

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| **A** | **Protocols** | | |
| **Ethernet** | |  | Used to connect devices in a LAN |
| **WiFi** | |  | Used to connect devices wirelessly |
| **Dynamic Host Configuration Protocol** | | DHCP | System for reusing IP addresses by reassigning unused ones |
| **Media Access Control** | |  | For addressing devices permanently, stored in the NIC |
| **File Transfer Protocol** | | FTP | For sending files over the internet |
| **HyperText Transfer Protocol** | | HTTP(S) | Protocol for transferring HTML files (HTTPS is with encryption) |
| **Internet Message Access Protocol** | | IMAP | For email where the client can manage a remote mailbox |
| **Post Office Protocol** | | POP | For email. An email is deleted from the server as the client retrieves it |
| **Simple Mail Transfer Protocol** | | SMTP | Protocol for pushing email to a server (now becoming obsolete) |
| **Transmission Control Protocol** | | TCP | A protocol for splitting packets and reassembling them after transmission, and for checking the data has been correctly delivered |
| **Internet Protocol** | | IP | Protocol for packet switching |
| **Transmission Control Protocol / Internet Protocol** | | TCP/IP | The protocol for general use of the internet |